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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,158	03/17/2004	Michael Melander	052837-0305	4141

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EXAMINER

RODRIGUEZ, RUTH C

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/802,158	Applicant(s) MELANDER, MICHAEL	
	Examiner Ruth C. Rodriguez	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-5, 7-10, 12-18 and 20 is/are rejected.
 7) ☒ Claim(s) 6, 11 and 19 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

mw

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed on 17 March 2004 has been considered for this Office Action.

Drawings

2. The drawings are objected to because reference character "18" located on the top left side of Figure 1(a) should be replaced with --17-- since the sidewall or plate of the coupler body is being identified with this reference character and the reference character between "15" and "11" in the right side of Figure 2b is unclear and cannot be identified. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it exceeds 150 words.

Claim Objections

5. Claims 1 and 2 are objected to because of the following informalities:

- Claim 1, line 4, "which" should be replaced with --transverse member-- since it is unclear to what element which is referring to.

- Claim 1, lines 5, 7, 8 and 16, "side walls" should be replaced with --sidewalls--.

- Claim 3, line 2, "side walls" should be replaced with --sidewalls--.

- Claim 9, line 2, "which" should be replaced with --transverse member-- since it is unclear to what element which is referring to.

Correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 7-10, 12-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aker et al. (US 3,985,249) in view of Arnold (US 4,311,428).

A system couples a tool (60) to a machine (10). The system comprises a coupler body (62,64), an attachment member (34,36) and a lock pin (80). The coupler body comprises first and second opposed coupler sidewalls (70,72) and a plurality of transverse members (66,68). Each transverse member is coupled to the first and second opposite sidewalls (Fig. 6). The attachment member comprises first and second

opposed attachment member sidewalls (38,40). Each of the first and second opposed attachment member sidewalls defines a plurality of attachment slots (42,46) sized and positioned to receive the plurality of transverse members. The lock pin sized to be accepted by an opening provided in one of the sidewalls of the coupler body and an aperture provided in one of the sidewalls of the attachment member (Figs. 4 and 7). The opening of the coupler body and the aperture of the attachment member align to accept the lock pin when the plurality of transverse member are positioned within the plurality of attachment slots and the lock pin secures the position of the attachment member relative to the coupler body (Fig. 4). Aker fails to disclose the use of a first coupler boss member positioned between the first and second sidewalls and an attachment boss member positioned between the first and second opposed attachment member sidewalls. However, Arnold teaches a system that couples a tool (22) to a machine (14,18). The system comprises a coupler body (62), an attachment member (12) and a lock pin (900,900',900"). The coupler body comprises first and second opposed coupler sidewalls (62), a transverse member (60) and a first coupler boss (66) member. The transverse member is coupled to the first and second opposite sidewalls (Figs. 1-3). The first coupler boss member is positioned between the first and second sidewalls (Figs. 1, 3 and 9-11). The first coupler boss member has a principal axis running substantially parallel to the first and second opposed coupler sidewalls (Figs. 1, 3 and 9-11). The attachment member comprises first and second opposed attachment member sidewalls (30) and an attachment boss member (41). Each of the first and second opposed attachment member sidewalls defines an attachment slot (44) sized

and positioned to receive the transverse member (Fig. 2). The attachment boss member is positioned between the first and second opposed attachment sidewalls (Figs. 1, 3 and 9-11a). The attachment boss member has a principal axis running substantially parallel to the first and second opposed attachment member sidewalls (Figs. 1, 3 and 9-11a). The lock pin sized to be accepted by the first coupler boss member and the attachment boss member (Figs. 9-11a). The first coupling boss and the attachment boss member align to accept the lock pin when the transverse member is positioned within the attachment slot and the lock pin secures the position of the attachment member relative to the coupler body (Figs. 1, 3 and 9-11a). The lock pin is an improved lock pin that is located opposite to the working part of the tool such that the lock pin will not be affected by the operation of the tool (C. 1, L. 48-50). Additionally the lock pin is provided with an additional means to securely retain the lock pin in place (C. 5, L. 28-53). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to have the lock pin engaging a coupling boss and an attachment boss member in accordance with the teaching of Arnold in the system disclosed by Aker. Doing so, will provide an improved lock pin that is located opposite to the working part of the tool such that the lock pin will not be affected by the operation of the tool and the lock pin is provided with an additional means to securely retain the lock pin in place to prevent accidental disengagement of the lock pin.

Arnold teaches that

- The system further comprises a retaining pin (910,910',910"). The retainer pin secures the lock pin in place when the lock pin is securing the position of the attachment member relative to the coupler body (Figs 9-11a).

- The system further comprises a second coupler boss member positioned between the first and second opposite sidewalls (Figs. 1 and 9-11). The second coupler boss member is substantially in line with the first coupler boss member and sharing the same principal axis (Figs. 1 and 9-11). The second coupler boss member is sized to accept the lock pin (Figs. 1 and 9-11).

Aker also discloses that:

- Each of the plurality of transverse member comprises a pin (66,68) extending between the first and second opposed sidewalls, a first pin boss operatively connecting the pin to the first coupler sidewall and a second pin boss operatively connecting the pin to the second coupler sidewall (Fig.6).

- Each of the first and second pin bosses for each of the plurality of transverse member contact one of the plurality of attachment member slots when the position of the attachment member relative to the coupler body (Fig. 6).

- Aker discloses that the attachment member is coupled (via the coupler body) to a bucket (60).

Aker fails to disclose that the attachment member is coupled to a grapple.

However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to have the attachment member coupled to a grapple since it is well known in the heavy machinery art to have the same coupler structure for multiple

tools attached to the machine such as buckets of different sizes and grapples such that coupler allows quick installation of the necessary tool to a machine taking into consideration the necessities of the job to be performed.

Regarding to claim 9 having similar limitations to claim 1, Aker discloses that the coupler includes first and second side walls joined by a lower coupler wall (62,64). The first and second side walls defining a primary axis (Fig. 6). Arnold also teaches that the coupler includes first and second side walls joined by a lower coupler wall (62). The first and second side walls defining a primary axis (Fig. 4). Arnold teaches that only one coupler boss is fixedly attached to the lower coupler wall. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of coupler bosses being fixedly attached to the lower coupler wall since duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Providing an additional boss will provide a fail safe system where the additional boss will maintain the coupler joined to the attachment member in case one of the bosses fail.

The plurality of coupler boss member consists of two coupler boss members (as modified above).

In accordance with the modification made above, Aker provides providing a coupler comprising first and second coupler side walls, a plurality of coupler bosses (as modified by Arnold) and a plurality of transverse members. The first and second coupler side walls are joined by a lower coupler wall. The first and second side walls define a primary axis therebetween. The plurality of coupler bosses fixedly attached to

the lower coupler wall (as taught by Arnold and modified above). The plurality of coupler bosses is positioned substantially in-line with each other along the primary axis (as taught by Arnold). Each of the plurality of transverse members is couple to the first and second coupler side walls. Aker also provides an attachment member comprising first and second attachment side walls and an attachment member boss (as modified by Arnold). Each of the first and second attachment side walls comprises a plurality of attachment member slots. The attachment member boss is positioned between the first and second attachment side walls (as taught by Arnold). Aker also discloses that the plurality of transverse members are mated with the plurality of attachment slots (Figs. 1-7). As taught by Arnold, a lock pin is inserted through the plurality of couplers and the attachment member boss to secure the position of the attachment member relative to the coupler (Figs. 9-11a).

The method further comprises the step of securing the lock pin with the retainer pin (Figs. 9-11a of Arnold).

Allowable Subject Matter

8. Claims 6, 11 and 19 and objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Birk (US 3,760,883), DiLillo et al. (US 3,845,871), Aker et al. (US 3,985,249), Ballinger (US 4,297,074), Arnold (US 4,311,428), Lockwook (US 4,495,717), Larwin (US 4,963,071), Takekata et al. (US 5,263,810), Kaczmariski et al. (US 5,985,535), Pisco (US 6,123,501), Pemberton (US 6,233,852), Gilmore, Jr. (US 6,428,265 B1) and Evans et al. (US 6,487,800 B1) are cited to show state of the art with respect to coupling systems having some of the features being claimed by the current application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth C Rodriguez whose telephone number is (571) 272-7070. The examiner can normally be reached on M-F 07:15 - 15:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075.

Submissions of your responses by facsimile transmission are encouraged. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase the patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as PTO's mailroom

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processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MPEP § 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee that the applicant is paying by check **should not be** submitted by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP § 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to
the Patent and Trademark Office (Fax No. (571) 273-8300) on (Date) .

(Typed or printed name of person signing this certificate)

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP § 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response has been transmitted by facsimile will cause further unnecessary delays in the processing of your application, duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6640.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth C. Rodriguez
Patent Examiner
Art Unit 3677

RCR

rcr
September 19, 2005


ROBERT J. SANDY
PRIMARY EXAMINER